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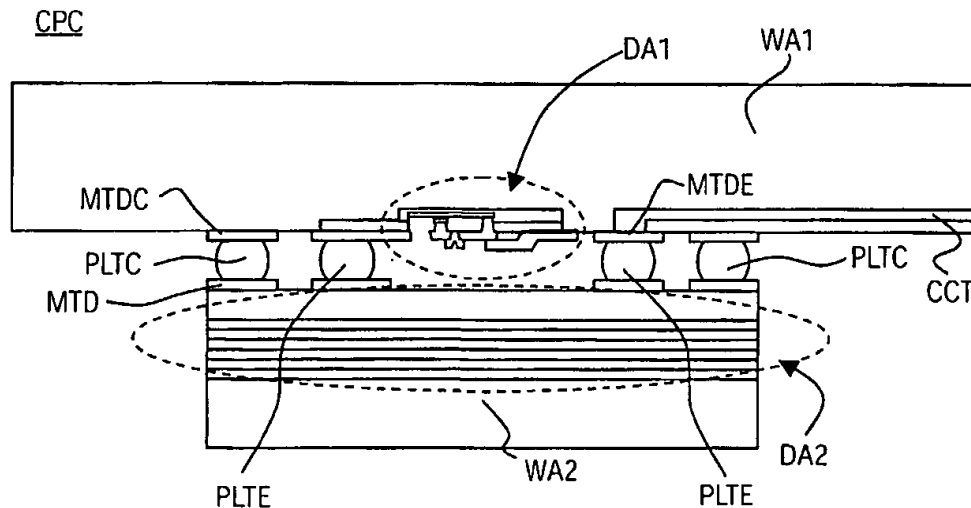
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- (74) Agent: **CHAFFRAIX, Jean**; Société Civile SPID, 156 Boulevard Haussmann, F-75008 Paris (FR).
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(54) Title: CHIP STACK WITH INTERMEDIATE CAVITY



(57) Abstract: The invention relates to a method for connecting a connecting surface of a first silicon wafer [WA1] with a connecting surface of a second silicon wafer [WA2] so as to form an insulated cavity after assembly, at least one of the two silicon wafers [WA] including at least one functional area [DA] intended to be within the cavity. The method according to the invention includes a step [PLTS] of depositing alloy soldering bumps [PLTC] on the connecting surface of the first silicon wafer [WA1], said bumps [PLTC] being separated from one another by an even distance which is sufficiently small to cause joinings during the assembly of the two silicon wafers. Said step [PLTS] of depositing the soldering bumps [PLTC] is carried out during the step of depositing the soldering bumps [PLTE] intended for the electrical contacts. The method includes a reflux soldering step [RFX] for assembling the two silicon wafers by melting of the alloy soldering bumps. Application: Protection of semiconductor elements sensitive to the external conditions.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Y	claims 1,8,13-15; figures 5,6	2
X	PATENT ABSTRACTS OF JAPAN vol. 008, no. 200 (E-266), 13 September 1984 (1984-09-13) -& JP 59 088864 A (MATSUSHITA DENKI SANGYO KK), 22 May 1984 (1984-05-22) abstract	1,3,6
Y	US 6 097 097 A (HIROSE TATSUYA) 1 August 2000 (2000-08-01)	2
A	figure 1C	1,6-8
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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